Table 2-H-3
Previous Studies, Northern Mountain Crossing – High-Speed Train Alignment Attainment of Objectives
Bay Area to Merced Region

ALIGNMENTS

Alignment Name = Alignment Carried Forward **Alignment Name** = Alignment Eliminated = Reason for Elimination

OBJECTIVE	Altamont Pass	Pacheco Pass	Panoche Pass
Maximize Ridership/ Revenue Potential	3 • Substantially less frequency to and from the major SF Bay Area intercity travel markets than the Pacheco Pass or Panoche Pass • Longer travel times between San Jose and Los Angeles than the Pacheco Pass or Panoche Pass • More directly serves market between Bay Area to northern Central Valley Cities • Shorter travel times than Pacheco between Sacramento and the Bay Area (25 minutes less for express between Sacramento to San Jose; 41 minutes less for express between Sacramento and San Francisco)	5 • Highest ridership and revenue potential • Shorter travel times than Altamont between Los Angeles and San Jose (10 minutes shorter express; 26 minutes shorter local) • Comparable travel times with Altamont between Los Angeles and San Francisco (3 minutes longer express; 8 minutes shorter local) • Competitively serves market between Bay Area and Central Valley Cities • Increase of 1.1 million annual riders over Altamont Pass • Increase of $56 million annual revenue over Altamont Pass	1 • Lowest ridership and revenue potential • Longer travel times than Pacheco between Sacramento and San Jose (37 minutes longer for express service) • Not a competitive connection between Sacramento/Northern San Joaquin Valley and the Bay Area (35-40 miles south of the Pacecho Pass)
Maximize Connectivity and Accessibility	2 • Substantially less frequency to and from the major SF Bay Area intercity travel markets than the Pacheco Pass or Panoche Pass • Requirement for new SF Bay crossing makes service to SF Peninsula uncertain	5 • Best connectivity/accessibility for major intercity travel markets	3 • Does not provide a competitive connection between Sacramento/Northern San Joaquin Valley and the Bay Area • Provides good connectivity between the SF Bay Area and Southern California

ALIGNMENTS

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OBJECTIVE	Altamont Pass	Pacheco Pass	Panoche Pass
Minimize Operating and Capital Costs	4 • Lowest estimated capital costs • Requires 3 way service split to serve the Bay Area • Requires new Bay Crossing to serve San Francisco peninsula – high construction and environmental mitigation costs anticipated with new bridge could greatly reduce cost difference with Pacheco Pass and Panoche Pass • New SF Bay Crossing is a major additional constructability issue and source for project delay	3 • High capital costs (estimated to cost $2 billion more than Altamont Pass) • Serves the Bay Area from the south (San Jose) requiring only one service split to serve both San Francisco Peninsula and East Bay • Much higher frequency of service than Altamont • Requires fewer trainsets to provide similar service level than Altamont • Potentially lower operating and maintenance costs	2 • Highest capital costs (estimated at approximately $500 million more than Pacheco Pass) • Longer than Pacheco (30 miles of additional line required) • Longer distance through mountain pass • Serves the Bay Area from the south (San Jose) requiring only one service split to serve both San Francisco Peninsula and East Bay • Much higher frequency of service than Altamont • Requires fewer trainsets to provide similar service level than Altamont
Maximize Compatibility with Existing and Planned Development	3 • Medium compatibility with existing and planned development through mountain pass	2 • Low compatibility with existing and planned development through mountain pass	2 • Low compatibility with existing and planned development through mountain pass
Minimize Impacts on Natural Resources	1 • Highest potential impacts on sensitive wetlands, salt water marshes and aquatic habitat • Greatest impacts on SF Bay and Don Edwards Wildlife Refuge • High impacts on sensitive habitat that supports special status and endangered • Higher potential impacts on threatened and endangered species through the mountain pass section	3 • Higher potential impacts on water resources and park and recreation areas through mountain pass area	3 • High impacts on water resources, wetlands and floodplains • Medium impacts on threatened and endangered species
Wetlands (sites/area)	(24/20.7 ac) Central Valley to Niles Junction (16/6.71 ac) Niles Junction to Redwood City	(57/290ac)	N/A
Stream Crossings (number of crossings/linear ft)	(58/2,900 linear ft and 7,014 linear ft for Bay Crossing)	(77/3,850)	N/A
Minimize Impacts on Social and Economic Resources	3 • Medium impacts on social and economic resources	3 • Medium impacts on social and economic resources	3 • Medium impacts on social and economic resources
Minimize Impacts on Cultural Resources	3 • Medium impacts on cultural resources	3 • Medium impacts on cultural resources	3 • Medium impacts on cultural resources

ALIGNMENTS

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OBJECTIVE	Altamont Pass	Pacheco Pass	Panoche Pass
Maximize Avoidance of Areas with Geologic and Soils Constraints	3 • High impacts for seismic constraints and shrink soils • Medium impacts on steep slopes • Low impacts on erodible soils	3 • High impacts on erodible soils • Medium impacts on seismic constraints and steep slopes • Low impacts on shrink soils	3 • Medium impacts on seismic constraints, shrink soils, erodible soils, and steep slopes • Longer length in mountainous areas
Maximize Avoidance of Areas with Potential Hazardous Materials	3 • Medium impacts on hazardous materials	3 • Medium impacts on hazardous materials	4 • Low impacts on hazardous materials

1 2 3 4 5

Least Favorable **Most Favorable**